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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/019,120	01/30/2002	Rauno Rantanen	3397-111PUS	1903

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EXAMINER	
TUROCY, DAVID P	
ART UNIT	**PAPER NUMBER**
1762	

DATE MAILED: 12/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/019,120	RANTANEN, RAUNO	
	Examiner	Art Unit	
	David Turocy	1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 November 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *20-67* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *20-24, 30-34, 36-40,42-46, 48-52, 54-58, 61-62, and 64-65* is/are rejected.

7)☒ Claim(s) *25-29,35,41,47,53,59,60,63,66 and 67* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The indicated allowability of claims 20-67 is withdrawn in view of the newly discovered reference(s) to US Patent 5614264 by Himes, US Patent 5789022 by Kustermann et al., US Patent 3301699 by H.J. Mozzi, US Patent 5405087 by Waryu et al, US Patent 5219618 by Daniels, and WO96/10463 by Kunze-Concewitz. Rejections based on the newly cited reference(s) follow.

2. The amendments, filed 11/16/2004, have been fully considered and reviewed by the examiner. The examiner acknowledges the previously cancelled claims 1-19 and the cancellation of claims 68-75. Claims 20-67 are pending.

Claim Objections

3. Claim 67 is objected to because of the following informalities: Claim 67 recites the limitation "blade plate". There is insufficient antecedent basis for this limitation in the specification. For the purposes of applying art, the examiner reads "blade plate" to refer to the "steel plate" as disclosed on page 8, second full paragraph.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

5. Claim 23, 28, 33, 39, 45,and 51 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 23 recites the limitation "the surface" in line 5. There is insufficient antecedent basis for this limitation in the claim. It is unclear to which surface the applicant is referring, the web or the roll nip. For the purposes of applying art, the examiner is taking "the surface" to read on the "surface that contacts the web in the roll nip"

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 20 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 5614264 by Himes.

Himes discloses a method for application of a treating agent onto a moving surface where a treatment agent is fed into a feeding chamber through a screen plate and then jets directed towards the moving surface are formed through openings in the nozzle plate and the entire peripheries of the openings are defined by the nozzle plate (Column 1, lines 64-67, Column 4, lines 5-19, Fig 3, Fig 5).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 20-22, 24, 48-50, 52, and 57-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5789022 by Kustermann et al ("Kustermann") in view of US Patent 5614264 by Himes.

Kustermann discloses utilizing a pressurized jet to apply treating agent onto a moving surface (Figure 1, Column3, lines 11-15). Kustermann discloses that it is known in the art to apply treating agent directly onto the fiber web as it moves along a path of travel (Column 1, lines 20-25). Kustermann also discloses a method of applying a treatment agent onto a roll to transfer the agent onto a moving web (Column 2, lines 60-65, Column 3, lines 13-15). Kustermann also discloses controlling the amount of treating agent fed onto the moving surface as a function of the volume flow of the treating agent (Column 3, lines 17-25).

However, Kustermann fails to teach sending the treatment agent into a feeding chamber, through a screen plate and then forming jets through openings defined by the peripheries of a nozzle plate.

However, Himes discloses a method for application of a treating agent onto a moving surface where a treatment agent is fed into a feeding chamber through a screen

plate and then jets directed towards the moving surface are formed through openings in the nozzle plate and the entire peripheries of the openings are defined by the nozzle plate (Column 1, lines 64-67, Column 4, lines 5-19, Fig 3, Fig 5). Himes discloses a method of delivering a fluid to a laterally moving printed circuit, but also discloses that such a method can be utilized on other articles delivered along a path of travel (Column 1, lines 65-67).

Therefore, it would have been obvious to one skilled in the art at the time of the invention to modify Kustermann to use the pressurized spray nozzle suggested by Himes to provide a desirable application of a treatment agent because Kustermann teaches applying a treating agent through a pressurized jet onto a surface moving along a path and Himes teaches a known pressurized jet using openings in a nozzle plate to apply a treating agent onto a moving surface.

10. Claims 23 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5789022 by Kustermann et al ("Kustermann") in view of US Patent 5614264 by Himes and taken further in view of US Patent 3301699 by H.J. Mozzi ("Mozzi").

Kustermann and Himes are applied here for the same reasons set forth in the 35 USC 103(a) rejection above. Kustermann discloses aiming the nozzles onto the surface of the applicator roll or under certain circumstances aiming the nozzles directly onto the surface of the web, while preferably the nozzles are aimed at the application roll near the roll nip (Column 5, lines 1-10). The examiner believes that such a disclosure shows

that it is within the skill of one of ordinary skill in the art to determine the direction to aim the nozzles depending on the circumstances. However, Kustermann and Himes do not teach applying a portion of the treating agent directly onto the surface of the web and a portion of the treatment agent directly onto the surface, which contacts the web in the roll nip.

Mozzi, teaching of application of a teaching agent onto a moving web, discloses aiming the pressurized spray nozzles so that a portion of the treating agent contacts the web and a portion of the treating agent contacts the surface of the roll (Column 2, lines 45-56, Figure 2).

Therefore, it would have been obvious to one skilled in the art at the time of the invention to modify Kustermann and Himes to aim the spray nozzles as suggested by Mozzi to provide a desirable coating of a continuously moving surface because Kustermann and Himes teach that it is within the skill of one ordinary in the art to determine the direction to aim the nozzle and Mozzi teaches that it is known in the art to aim the nozzles so that a portion of the spray pattern contacts both the web and the transfer roll.

11. Claims 36-38, 40, 55 and 64-65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kustermann in view of Himes taken further in view of US Patent 5405087 by Waryu et al. ("Waryu").

Kustermann in view of Himes teaches all the limitations of these claims as discussed in the 35 USC 103(a) rejection above, except they fail to teach cleaning the nozzle plate utilizing a needle-shaped water jet.

However, Waryu, teaching of applying a coating through a pressurized jet, discloses cleaning the opening in the nozzle by directing a needle-shaped water jet at the nozzle (Figure 1, Column 4, lines 21 – 37). Waryu discloses that such a cleaning jet will wash off and prevent any accumulating of the spray material on the nozzle (Column 5, lines 57-51).

Therefore, it would have been obvious to one skilled in the art at the time of the invention to modify Kustermann in view of Himes to clean the openings of the nozzle with a water jet suggested by Waryu to provide a desirable prevention of accumulation of coating material on a nozzle because Kustermann in view of Himes teaches coating a substrate through a nozzle and Waryu teaches that when coating a substrate using a nozzle it is advantageous to provide a cleaning water jet to wash off and prevent accumulation of coating material on the nozzle.

12. Claims 30-32, 34, 54, and 61-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kustermann in view of Himes and Waryu taken further in view of US Patent 5219618 by Daniels ("Daniels").

Kustermann in view of Himes and Waryu teaches all the limitations of these claims as discussed in the 103(a) rejection above, except they fail to teach cleaning the nozzle plate by blasting steam against the nozzle plate.

However, Daniels, teaching of a coating a moving web, discloses preventing the build-up of coating material on doctor blade using steam, water, a mixture of steam and water, or any material that does not affect the process (Column 2, lines 50-58). While it is noted that Daniels provides a cleaning jet onto a doctor blade, Daniels is utilized here to show that it is known in the art to blast steam, water, or any material appropriate for the process, at a surface to provide desired cleaning.

Therefore, it would have been obvious to one skilled in the art at the time of the invention to modify Kustermann in view of Himes and Waryu to use the steam cleaning suggested by Daniels to provide a desirable cleaning of the nozzle because Kustermann in view of Himes and Waryu teaches using a water jet to prevent accumulation of coating material on the nozzle and Daniels teaches steam is a known substitute to water to wash off and/or prevent any undesirable coating material on a surface.

13. Claims 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kustermann in view of Himes, Mozzi and Waryu taken further in view of US Patent 5219618 by Daniels ("Daniels").

Kustermann, Himes, Mozzi, Waryu, and Daniels are applied here as applied here for the same reasons as give above in the 35 USC 103(a) rejection.

14. Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kustermann in view of Himes and Mozzi and taken further in view of US Patent 5405087 by Waryu et al. ("Waryu").

Kustermann, Himes, Mozzi, and Waryu are applied here as applied here for the same reasons as give above in the 35 USC 103(a) rejection.

15. Claims 42-44, 46, and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kustermann in view of Himes and Waryu taken further in view of WO96/10463 by Kunze-Concewitz ("Kunze-Concewitz").

*** Please note: US Patent 5964952 by Kunze-Concewitz is utilized here as a fair translation of WO96/10463 by Kunze-Concewitz ***

Kustermann in view of Himes and Waryu teaches all the limitations of these claims as discussed in the 103(a) rejection above, except they fail to teach cleaning the nozzle plate with ultrasound.

However, Kunze-Concewitz, teaching of a method of cleaning a surface with water, discloses conventional cleaning methods include ultrasound and spraying water at high pressure from a nozzle (Column 1, lines 10-17). While it is noted that Kunze-Concewitz teaches a method of cleaning a surface, Kunze-Concewitz is utilized here to show that it is known in the art to clean a surface using any number of conventional cleaning methods including ultrasound and high-pressure water.

Therefore, it would have been obvious to one skilled in the art at the time of the invention to modify Kustermann in view of Himes and Waryu to use the ultrasound cleaning method as suggested by Kunze-Concewitz to provide a desirable nozzle cleaning because Kustermann in view of Himes and Waryu teaches cleaning a nozzle with a high pressure water jet and Kunze-Concewitz teaches ultrasound cleaning is a known substitute to high pressure water jet to clean a surface. Please note that the test of obviousness is not an express suggestion of the claimed invention in any or all references, but rather what the references taken collectively would suggest to those of ordinary skill in the art presumed to be familiar with them (*In re Rosselet*, 146 USPQ 183).

16. Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kustermann in view of Himes and Mozzi and taken further in view of WO96/10463 by Kunze-Concewitz ("Kunze-Concewitz").

Kustermann, Himes, Mozzi, and Kunze-Concewitz are applied here as applied here for the same reasons as give above in the 35 USC 103(a) rejection.

Allowable Subject Matter

17. Claims 25-29, 35, 41, 47, 53, 59-60,63, and 66-67 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in

independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

As for claims 25-29, 35, 41, 47, 53, 59-60,63, and 66: None of the prior art cited or reviewed by the examiner discloses providing a nozzle plate moving transversely relative to the direction of the movement of the moving surface, so that at least a portion of the length of the nozzle plate is outside of the width of the area being treated. The closest prior art, Himes, discloses a nozzle plate already extending over the edges of the surface to be treated and does not require movement to get there.

As for claim 67: none of the prior art cited or reviewed by the examiner discloses providing a steel plate movably fitted in the feeding chamber so that the steel blade scrapes the screen plate and nozzle plate during movement.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Turocy whose telephone number is (571) 272-2940. The examiner can normally be reached on Monday-Friday 8:30-6:00, No 2nd Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive Beck can be reached on (571) 272-1415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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